

Serial No.: 10/719,609
Reply to Office action of April 5, 2005.

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REMARKS

Applicant respectfully requests entry of this Amendment and reconsideration of the pending claims. In the Office Action of April 5, 2005, claims 1-20 were rejected. In this response, claim 1 is amended and claims 2, 3, 8, 9, 10, and 21-30 are hereby cancelled. Claims 1, 4-7, and 11-20 remain pending in the application.

35 U.S.C § 112 First Paragraph Objection and Rejection

The specification was objected to the under 35 U.S.C § 112, first paragraph, as failing to adequately teach how to make and/or use the invention, and how to achieve the equation related to the minimum weight average molecular weight. At least claim 1 was rejected under 35 U.S.C § 112, first paragraph, for the reasons set forth in the objection to the specification. Claim 1 has been amended to provide a composition range and a minimum molecular weight value instead of an equation. The composition range and minimum molecular weight are shown in the specification, as well as a teaching of making and using at least sufficient for one of ordinary skill in the art to make and practice the invention. Applicant submits that for the composition range and minimum molecular weight, the requirements under 35 U.S.C § 112, first paragraph are met. Thus, the objection, and the consequent rejection to the claims, are overcome. Applicant urges that the objection and rejection under 35 U.S.C § 112 be withdrawn.

35 U.S.C. § 103(a) Rejections

Claims 1-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Cotter et al or GB 1264900 in view of Keitoku et al or Savariar et al.

Cotter et al discloses a composition comprising a polyaryl ether containing recurring units of the formula: -O-E-O-E' wherein E' is the residuum of 4,4'-dichlorodiphenyl sulfone, and E is selected from the group of tetramethylbisphenol A, admixed with up to 50 mole% of a second diphenol such as biphenol. GB 1264900 discloses at least in Example 2 a 50:50 blend of bisphenol A and p,p'-bisphenol was reacted with 4,4'-dichlorodiphenyl sulfone to have the repeating unit. Keitoku reference discloses bisphenol A and biphenyl unit comprising polyether sulfones. Savariar reference discloses that poly(biphenyl ether sulfone) are prepared by contacting equimolar amounts of 4,4'-biphenol, with one or more other bis hydroxyl

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aromatic compounds such as 4,4'-dihydroxydiphenyl sulfone, bisphenol A, and dihalodiarylsulfones such as 4,4'-dichlorodiphenylsulfone or 4,4'-difluorodiphenyl sulfone.

The instant invention claims "A polyethersulfone composition comprising structural units derived from a monomer mixture comprising bisphenol A and 4,4'-biphenol present in a range of from about 70 mole percent to about 80 mole percent based on total moles of diphenolic monomers, wherein the polyethersulfone has a minimum weight average molecular weight (M_w) of 54,000." Table 1 shows that the notched izod values are desirably and unexpectedly high for the polyethersulfone composition having structural units derived from 4,4'-biphenol in the aforementioned composition range, and having the suggested minimum molecular weight.

The surprising result is not disclosed, taught or suggested by any of the cited references. Particularly, there is no disclosure, teaching or suggestion in Cotter et al, GB1264900, the Keitoku reference, or the Savariar reference, singly or in combination, to choose diphenol monomer compositions comprising amounts of 4,4'-biphenol in the claimed or having the claimed minimum molecular weight of 54,000. Because there is nothing in the cited references that would indicate any desirable properties, it would be unreasonable to suggest that there would be motivation to select materials as claimed. Neither is there any indication that one of ordinary skill would have a reasonable expectation of successfully achieving a desired set of properties. Without a proper motivation to modify, or a reasonable expectation of success, a *prima facie* case of obviousness has not been made. As such, Applicant submits that Claim 1, and the claims that depend therefrom, is allowable over the cited art. Notice to that effect is respectfully requested.

Claim 6 was rejected under 35 U.S.C. 103(a) as being unpatentable over above-references and further in view of Fukuyama. The Office Action states that the references disclose the polyarylethersulfone composition, and that the Fukuyama reference provides evidence that the additional monomer containing spiroindane unit may be known in the art to be in a polyarylethersulfone composition. The Office Action continues that the combination of references would provide a polyethersulfone having the added properties of toughness, chemical inertness, or thermal and oxidative stability.

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Applicant contends that replacement of the additional monomer with a spiroindane monomer in the polyarylethersulfone composition would be, at best, obvious to try. One of ordinary skill in the art would not have a reasonable expectation of unexpected results, however. Obvious to try is not the standard by which a proper *prima facie* case of obviousness is made.

With particular reference to claim 6, the cited references differ at least in that they do not disclose the claimed additional diphenolic monomer. Without a disclosure of all the elements of a claim, whether relying on a single reference or a combination of references, a proper *prima facie* case of obviousness cannot be made.

Applicant submits that a proper *prima facie* case of obviousness has not been made to support a rejection of claim 6. Further, claim 6 is dependent on an allowable independent claim 1, and is allowable for at least that reason.

In view of the foregoing amendments and remarks, Applicant respectfully submits that each of claims 1, 4-7, 11-20 are in condition for allowance. Applicant thus courteously solicits a review of the proposed amendments and prompt allowance of these claims. Should anything further be needed to place the application in condition for allowance in the Examiner's view, please contact the Applicant's undersigned representative at the telephone number below. Any additional fees for the accompanying response are hereby petitioned for, and the Director is authorized to charge such fees as may be required to Deposit Account 07-0868.

Respectfully submitted,



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